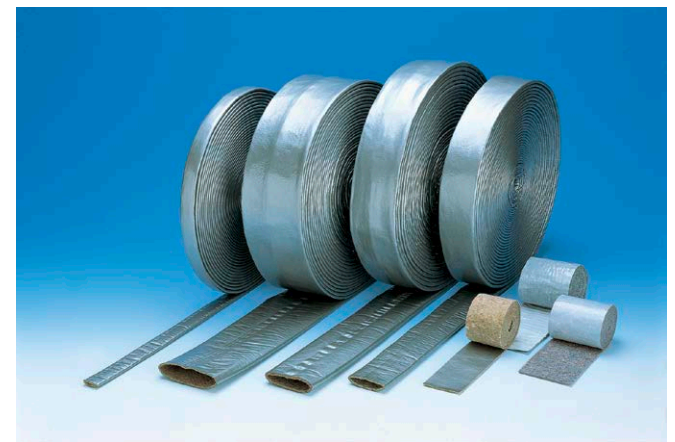


PA



Berner-Fleece 4 mm

- Optimum protection against the risk of condensation
 - ▶ Diffusion-proof outer PE skin film
- Particularly good sound insulation
 - ▶ Reduction of flow noises and clicking/cracking noises thanks to the certified 4 mm synthetic nonwoven material
- Quick, simple and easy to slip over the pipe
 - ▶ Its diameter is 2 – 3 mm larger than that of the pipe
- The tear-resistant and step-proof outer skin is highly resistant to damage, even when used for concealed installation
- PE coated synthetic non-woven material with no overlap
 - ▶ Flush joint of the insulating material
- Thermal bridging is avoided
 - ▶ Very good heat conductance value, leaving waste water pipes and adjacent components safely protected against the risk of condensation
- Contains no substances which are aggressive to metal (tested by LGA)
- Outer PE skin film offers a clean appearance
- Bonded to form insulating hoses for insulation of heating pipes without special requirements in accordance with the German energy saving directive (EnEV) or cold water pipes in accordance with DIN 1988 (thickness of thermal insulation layer: 4 mm)



Application Area

- Perfect for impact sound insulation, prevention of condensation, anti-corrosion protection and where a high level of resistance to damage is required

- Also suitable when used for concealed installations / drain pipes with no special requirements

Hints

- Please request a copy of the test certificates

Technical Data

Length	10 m
Insulation Thickness	4 mm
Norms	DIN 4109
Heat Conductivity At 10° C Middle Temperature	0.0375 W/mK
Heat Conductivity At 40 ° C Middle Temperature	0.0404 W/mK
Fire behaviour according to DIN 4102	B2
Sound tested	Fraunhofer Institute for Building Physics
Temperature resistance	-70 °C - 105 °C

Title	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
Berner-Fleece	1/4 "	8 mm	13.5 mm	10 mm	15 mm	10/100	130114
Berner-Fleece	3/8 "	10 mm	17.2 mm	15 mm	18 mm	10/100	130111
Berner-Fleece	1/2 "	15 mm	21.3 mm	20 mm	22 mm	10/100	130108
Berner-Fleece	3/4 "	20 mm	26.9 mm	25 mm	28 mm	10/100	130110
Berner-Fleece	1 "	25 mm	33.7 mm	32 mm	35 mm	10/100	130112
Berner-Fleece	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	10/100	130113

AGR: 13.140

Berner-Fleece DN

- Particularly good sound insulation and reduction of flow noises and clicking/cracking noises
- Thermal bridging avoided and excellent protection against the formation of condensation
 - ▶ Very good heat conductance value, leaving waste water pipes and adjacent components safely protected against the risk of condensation
- The outer PE skin film protects the insulating material and the pipe against moisture



Pipe insulation

- Quick and easy to slip over the pipe – even over couplings/bushes and bends in HT pipes
- The tear-resistant and step-proof outer skin is highly resistant to damage, even when used for concealed installation
- No overlap
 - Flush joint of the insulating nonwoven material
- Contains no substances which are aggressive to metal (tested by LGA)



Application Area

- Airborne/impact sound insulation, prevention of condensation on HT pipes, PE pipes and SML drain pipes

Hints

- Residual sound values, isolated from sound bridges – refer to the test certificates from the Fraunhofer Institute for Building Physics
- Please request a copy of the test certificates!

Technical Data

Length	10 m
Insulation Thickness	4 mm
Heat Conductivity At 10° C Middle Temperature	0.0375 W/mK
Heat Conductivity At 40 ° C Middle Temperature	0.0404 W/mK
Fire behaviour according to DIN 4102	B2
Sound tested	Soundproofing of sewage systems, Fraunhofer Institute for Building Physics
Temperature resistance	-70 °C - 105 °C

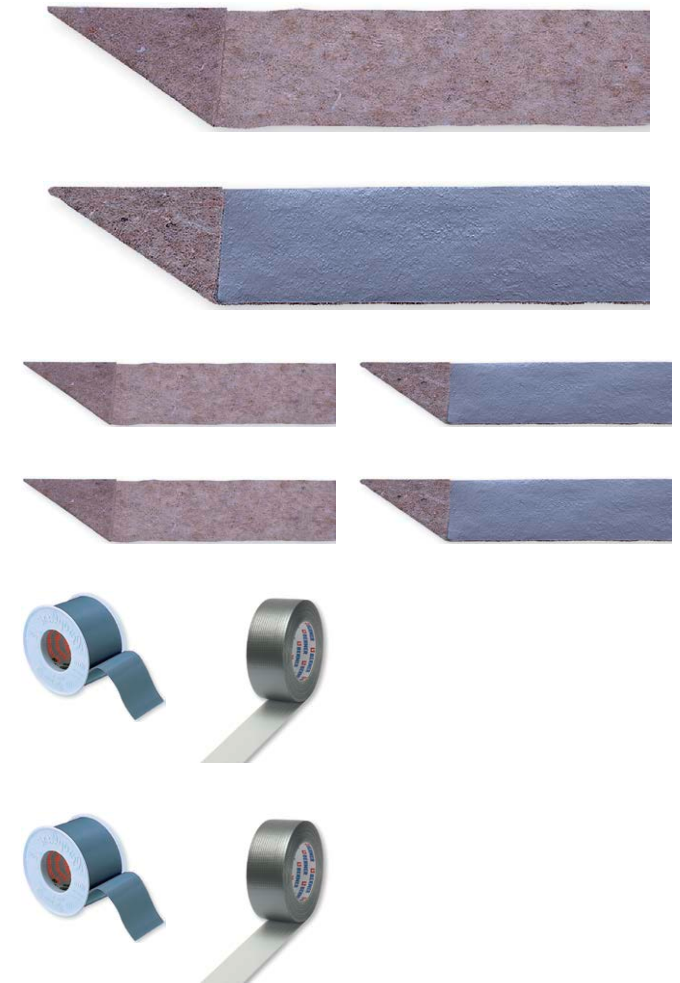
Title	Hose Internal Ø? minimum	Sml pipe nominal size, Dn Mm	Sml pipe external Ø max	Hat pipe nominal width, Dn Mm	PU m	Article No.
Berner-Fleece DN	64 mm	50 mm	58 mm	50 mm	25	130085
Berner-Fleece DN	89 mm	70 mm	78 mm	70 mm	25	130107
Berner-Fleece DN	127 mm	100 mm	110 mm	100 mm	25	130082
Berner-Fleece DN	146 mm	125 mm	135 mm	125 mm	25	109578

AGR: 13.000

Insulating Strips uncoated

Application Area

- For the wrapping of branches and fittings



Title	Insulation Thickness	Length	Width	PU Roll	Article No.
INSUL.STRIP COATED 70/360	2 mm	3.6 m	70 mm	25/200	130115
INSUL.STRIP UNCOATED.70/360	2 mm	3.6 m	70 mm	25/200	122235

AGR: 13.020 / 13.021

Berner-ISL

- The solid PE-foil ensures a high amount of tear strength against mechanical damage during the raw construction phase
- Further the concealed sliding film on the inside facilitates the ??? Of the pipeline and also ensures that the insulation won't get damaged during the assembling process
- Sound insulation ensures that no flow noise and pops are passed on to adjacent components
- Protection against condensation water



INTERNAL/Approved (2019-03-23 01:32:14)

Pipe insulation

Application Area

- Insulation of cold water pipes according to DIN 1988 or heating pipes without requirements according to EnEV

Characteristics

- Extruded, highly elastic PE foam with tear resistant PE film

Processing Information

- Please note the required insulation thickness for the prevention of condensation at the insulation surface

Hints

- Reaction to fire: Euroclass E
- DIN EN 13501-1 (former B2)
- Color: silver
- Range of Temperature: -40° to +90°

Technical Data

Fire Behavior	normally flammable according to ÖNORM B 3800
Heat Conductivity At 10° C Middle Temperature	0.035 W/mK
Heat Conductivity At 40 ° C Middle Temperature	0.039 W/mK

Title	Insulation Thickness	Length	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
BERNER-ISL 4MM 1/4"/15MM	4 mm	10 m	1/4 "	8 mm	13.5 mm	10 mm	15 mm	10/100	108106
BERNER-ISL 4MM 3/8"/18MM	4 mm	10 m	3/8 "	10 mm	17.2 mm	15 mm	18 mm	10/100	108107
BERNER-ISL 4MM 1/2"/22MM	4 mm	10 m	1/2 "	15 mm	21.3 mm	20 mm	22 mm	10/100	108108
BERNER-ISL 4MM 3/4"/28MM	4 mm	10 m	3/4 "	20 mm	26.9 mm	25 mm	28 mm	10/100	108109
BERNER-ISL 4MM 1"/35MM	4 mm	10 m	1 "	25 mm	33.7 mm	32 mm	35 mm	10/100	108110

AGR: 13.030

Berner Flex, insulating thickness 9 mm

- Made of special quality polyethylene
- Consistent in form
- Light weight
- High flexibility

Application Area

- Insulation of plumbing and heating pipes



- Heat and structure-borne noise insulation
- Anticorrosive

Characteristics

- Insulation of water and heating pipes

Processing Information

- Drag over the tube during the pipe installation

Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	+100 °C
Fire Behavior	Euroclass BL s1 d0
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK

Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
Berner Flex 9 mm	9 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	1/380	130100
ISOFLEX 13-15	13 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	1/256	122231
Berner Flex 9 mm	9 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	1/330	130102
ISOFLEX 13-18	13 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	1/220	122232
Berner Flex 9 mm	9 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/250	130103
ISOFLEX 13-22	13 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/180	394549
Berner Flex 9 mm	9 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	1/190	130104
Berner Flex 9 mm	9 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/150	130099
ISOFLEX 13-35	13 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/120	122234
Berner Flex 9 mm	9 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	1/110	857206
ISOFLEX 13-42	13 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	1/90	122240
ISOFLEX 13-48	13 mm	2 m	48 mm	1 1/2 "	40 mm	48.3 mm	-	-	1/70	122241
ISOFLEX 13-60	13 mm	2 m	60 mm	2 "	50 mm	60.3 mm	50 mm	54 mm	1/48	122242

AGR: 13.130 / 13.131

BERNER-Flex SV

Characteristics

- Subsequent isolation and insulation at the laid pipe: with the usage

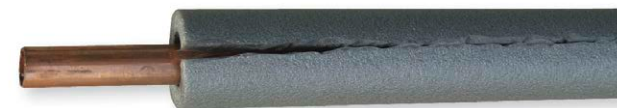


Pipe insulation

of a quick-locking mechanism and an adhesive film

Processing Information

- For adhesive bonding remove the foil and press against the interface



Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	85 °C
Fire Behavior	Euroclass BL s1 d0
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK

Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
ISOFLEX-SV 9-15	9 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	1/300	122243
ISOFLEX-SV 9-18	9 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	1/300	122244
ISOFLEX-SV 13-22	13 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/160	122250
ISOFLEX-SV 9-22	9 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/250	122245
ISOFLEX-SV 13-28	13 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	1/130	122251
ISOFLEX-SV 9-28	9 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	1/190	122247
ISOFLEX-SV 13-35	13 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/102	122252
ISOFLEX-SV 9-35	9 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/150	122248
ISOFLEX-SV 13-42	13 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	1/84	122253
ISOFLEX-SV 9-42	9 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	1/110	122249
ISOFLEX-SV 13-48	13 mm	2 m	48 mm	1 1/2 "	40 mm	48.3 mm	-	-	1/70	122255

AGR: 13.134

Berner-Flex SSL

Application Area

- For the insulation of heat and structure-borne sound of sanitary facilities and heating pipes as well as for the protection against mechanical damage during the construction period

Characteristics

- Insulating layer thickness: 9 mm

Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	100 °C
Fire Behavior	Euroclass E
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK



Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
ISO-SSL 1/4" 9-15	9 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	1/320	130066
ISO-SSL 3/8" 9-18	9 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	1/280	130067
ISO-SSL 1/2" 9-22	9 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/230	130068
ISO-SSL 3/4" 9-28	9 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	1/200	130069
ISO-SSL 1" 9-35	9 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/130	130070

AGR: 13.111

Berner-SSL 50 % EnEV

- Excellent all-around coverage against splashing water, corrosion and structure-borne sound
- Protects against external mechanic impacts
- Highly tear resistant

Application Area

- For the insulation of heat and structure-borne sound of sanitary facilities and heating pipes as well as for the protection against mechanical damage during the construction period

Characteristics

- Insulating layer thickness: 13mm



Pipe insulation

Hints

- Article nos. 130075 and 15863 can only be used in accordance with DIN 1988.

Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	100 °C
Fire Behavior	Euroclass E
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK

Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
ISO-SSL 1/4" 13-15	13 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	1/100	130071
ISO-SSL 3/8" 13-18	13 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	1/96	130072
ISO-SSL 1/2" 13-22	13 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	1/80	130073
ISO-SSL 3/4" 13-28	13 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	1/64	130074
Insulation with film 50 %	13 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	1/48	130075

AGR: 13.112 / 13.114

Berner-Flex SSL

Application Area

- For the insulation of heat and structure-borne sound of sanitary facilities and heating pipes as well as for the protection against mechanical damage during the construction period

Characteristics

- Insulating layer thickness: 20 mm

Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	100 °C
Fire Behavior	Euroclass E
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK



Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	Sml pipe nominal size, Dn Mm	PU m
ISOLATION TUBE SSL 1/4" 20-15	20 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	8 mm	1/120
ISOLATION TUBE SSL 3/8" 20-18	20 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	10 mm	1/108
ISOLATION TUBE SSL 1/2" 20-22	20 mm	2 m	22 mm	1/2 "	15 mm	21.3 mm	20 mm	22 mm	15 mm	1/108
ISOLATION TUBE SSL 3/4" 20-28	20 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	20 mm	1/80
ISOLATION TUBE SSL 1" 20-35	20 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	25 mm	1/70
ISOLATION TUBE SSL 20-42	20 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	-	1/56

Article No.

007310

007311

007312

007313

007314

030700

AGR: 13.113

INTERNAL/Approved (2019-03-23 01:33:14)

Pipe insulation

Isolation Tube

Application Area

- For the insulation of heat and structure-borne sound of sanitary facilities and heating pipes as well as for the protection against mechanical damage during the construction period

Characteristics

- Insulation thickness: 25 mm

Technical Data

Temperature Resistance, Min. Or Single Value	-40 °C
Temperature Resistance, Max	100 °C
Fire Behavior	Euroclass E
Heat Conductivity At 40 ° C Middle Temperature	0.040 W/mK



Title	Insulation Thickness	Length	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Steel pipe external Ø	Copper pipe nominal width, mm	Copper pipe external Ø	Sml pipe nominal size, Dn Mm	Sml pipe external Ø max
ISOLATION TUBE SSL 25/15	25 mm	2 m	15 mm	1/4 "	8 mm	13.5 mm	-	15 mm	-	8 mm
ISOLATION TUBE SSL 25/18	25 mm	2 m	18 mm	3/8 "	10 mm	17.2 mm	15 mm	18 mm	10 mm	-
ISOLATION TUBE SSL 25/28	25 mm	2 m	28 mm	3/4 "	20 mm	26.9 mm	25 mm	28 mm	20 mm	-
ISOLATION TUBE SSL 25/35	25 mm	2 m	35 mm	1 "	25 mm	33.7 mm	32 mm	35 mm	25 mm	-
ISOLATION TUBE SSL 25/42	25 mm	2 m	42 mm	1 1/4 "	32 mm	42.4 mm	40 mm	42 mm	-	-

PU m	Article No.
1	057624
1	057625
1/30	057627
1/26	057628
1/24	057629

AGR: 13.113

noise insulation hose Iso-SSI AS

Technical Data

Temperature Resistance, Max	90 °C
Fire Behavior	normally flammable according to DIN 4102



Title	Insulation Thickness	Length	Hose Internal Ø? minimum	Sml pipe nominal size, Dn Mm	Sml pipe external Ø max	PU m	Article No.
ISO-SSL AS 9MM DN 50	9 mm	10 m	64 mm	50 mm	58 mm	10/50	123829
ISO-SSL AS 9MM DN 70	9 mm	10 m	89 mm	70 mm	78 mm	10/50	123830
ISO-SSL AS 9MM DN 100	9 mm	10 m	127 mm	100 mm	110 mm	10/50	123831

AGR: 13.112

Rockwool

- Dimensionally accurate rock-wool pipe shells
- Odorless
- Durable
 - ▶ Single side slit
 - ▶ Laminated by a tear-resistant pure aluminium foil
- Resistant
 - ▶ Against putrefaction and mould formation
 - ▶ Highly water-resistant
 - ▶ Ageing resistant
- Non-flammable
 - ▶ Euroclass A2L s1 d0 according to EN 13501-1

Application Area

- Suitable for solar panels
- for heating- and service water pipes

Characteristics

- Dimensionally accurate rock-wool pipe shells
- slit single-sided, laminated by a tear-resistant pure aluminium foil



INTERNAL/Approved (2019-03-23 01:33:33)

Pipe insulation

- heavily water-resistant and odorless
- resistance against putrefaction and mould formation, ageing resistant

Hints

- Produced in AS-Quality according to AGI Q 132

Technical Data

Fire Behavior hardly flammable according to ÖNORM B 3800

Title	Pipe external Ø	Insulation Thickness	Length	Steel pipe nominal size, inch	PU m	Article No.
ROCKWOOL-ISO ALU 20-15	15 mm	20 mm	1 m	1/4 "	42	138251
ROCKWOOL-ISO ALU 20-18 3/8"	18 mm	20 mm	1 m	3/8 "	42	138252
ROCKWOOL-ISO ALU 30-18 3/8"	18 mm	30 mm	1 m	3/8 "	25	146760
ROCKWOOL-ISO ALU 20-22 1/2"	22 mm	20 mm	1 m	1/2 "	36	138253
ROCKWOOL-ISO ALU 30-22 1/2"	22 mm	30 mm	1 m	1/2 "	20	146761
ROCKWOOL-ISO ALU 20-28 3/4"	28 mm	20 mm	1 m	3/4 "	30	138254
ROCKWOOL-ISO ALU 30-28	28 mm	30 mm	1 m	3/4 "	20	044783
ROCKWOOL-ISO ALU 20-35 1"	35 mm	20 mm	1 m	1 "	25	138255
ROCKWOOL-ISO ALU 30-35	35 mm	30 mm	1 m	1 "	16	044785
ROCKWOOL-ISO ALU 20-42 1 1/4"	42 mm	20 mm	1 m	1 1/4 "	20	138256
ROCKWOOL-ISO ALU 30-42	42 mm	30 mm	1 m	1 1/4 "	12	044786
ROCKWOOL-ISO ALU 20-48 1 1/2"	48 mm	20 mm	1 m	1 1/2 "	16	138257
ROCKWOOL-ISO ALU 30-48	48 mm	30 mm	1 m	1 1/2 "	1/11	044787
ROCKWOOL-ISO ALU 20-60 2"	60 mm	20 mm	1 m	2 "	12	138259
ROCKWOOL-ISO ALU 30-60	60 mm	30 mm	1 m	2 "	9	044788

AGR: 13.120

Adhesive Tapes

Characteristics

- Tear-resistant due to an aluminized polypropylene foil
- High adhesion due to an acrylic adhesive cover
- Resistant against moisture, diluted alkaline and acids



Title	Length	Width	Thickness	Color	PU Piece	Article No.
ALU-ADH TAPE 50MM/50M	50 m	50 mm	0.035 mm	Aluminium	1/6/96	114259

AGR: 11.302

Knife for Insulating Materials

- The knife is serrated on both sides, which means that both sides can be used
- The blade is made of 2 mm thick non-rusting stainless steel.
- Wooden handle ergonomically shaped on both sides
- Suitable for hard and soft insulating materials – the edge is intended for soft insulating materials, while the fine-serrated edge is for hard insulating materials



Application Area

- Perfect for cutting insulating materials

Title	Length	Blade length x height mm	PU Piece	Article No.
Knife for Insulating Materials	425 mm	280 x 26 mm	1	002947

AGR: 03.300

INTERNAL/Approved (2019-03-23 01:33:51)

Pipe insulation

Climaflex Stabil Insulation Tube 4 mm

- Robust exterior protects against damage

Application Area

- Insulation from water and heating pipes

Characteristics

- Pipe insulation of closed-cell foam based on Polyethylene with robust shell for the application and heating and sanitation



Title	Insulation Thickness	Pipe external Ø	Steel pipe nominal size, inch	Copper pipe external Ø	PU m	Article No.
CLIMAFLEX TUBE 015-04/1/4"	4 mm	15 mm	1/4 "	15 mm	200	337578
CLIMAFLEX TUBE 018-04/3/8"	4 mm	18 mm	3/8 "	18 mm	180	337579
CLIMAFLEX TUBE 022-04/1/2"	4 mm	22 mm	1/2 "	22 mm	160	337576
CLIMAFLEX TUBE 028-04/3/4"	4 mm	28 mm	3/4 "	28 mm	140	337575
CLIMAFLEX TUBE 035-04/1"	4 mm	35 mm	1 "	35 mm	110	337577

AGR: 13.030

Berner Pren Uni Solar

- Berner-Pren Uni Solar consists of two with foil mantled hoses, which can be simply detached and attached with a patented glueing technique – saves time and money, e.g. at the connection to the collector – the protection mantle ist not damaged or harmed by this
- UV-resistant, weathering resistant, FCKW-free
- The return line is a feeler-line (2 x 0,75 mm²) with halogen-free, temperature resistant silicon insulation up to 180 °C pulled in
- Grid reinforced foil jacket protects against mechanical loading



Application Area

- Solar installations for the forward and backward connection between the collector field and the reservoir

Characteristics

- Black film coating protects against mechanical stress

Hints

- For the connection of 2 Bernese Pren-UNI solar tubes you need the Berner-Pren Uni Solar expansion fitting kit and the Berne-Pren double nipple

Scope Of Delivery

- Berner-Pren Uni Solar
- (pre-insulated stainless steel corrugated pipes)

Technical Data

Color	black
Material	Rubber
Heat Conductivity At 40 ° C Middle Temperature	0.045 W/mK

Title	Insulation Thickness	Copper pipe nominal width, mm	Copper pipe external Ø	PU m	Article No.
Berner-Pren Uni Solar	14 mm	16 mm	21.5 mm	15/25	041407
Berner-Pren Uni Solar	14 mm	20 mm	26.7 mm	15/25	041415

AGR: 13.921

Berner Pren Uni Solar Expansion Fitting Set

Characteristics

- Screw-Fastening Set for Pren Uni Solar corrugated pipe

Scope Of Delivery

- 4 x inlay rings
- 4 x screw caps
- 4 x sealing rings



Title	Hose diameter	PU Piece	Article No.
Solar-fitting set DN 16	16	1	041423
Solar-fitting set DN 20	20	1	041424

AGR: 13.921

Berner Pren Double Nipple

Scope Of Delivery

- 2 Double Nipple



Title	PU Paar	Article No.
Double nipple set DN 16	1	056151
Double nipple set DN 20	1	056152

AGR: 13.921

Pren Uni Solar quick connect with conical eyternal thread piece

Characteristics

- Quick coupling for Pren Uni Solar,
- with a conical external thread

Scope Of Delivery

- 1 coupling is being supplied

Title	PU Piece	Article No.
SO-SDN 16-E1/2 KO-A-GEW.	1	177943*
SO-SDN 20-E3/4 KO-A-GEW.	1	177817

* = The delivery time is 30 days

AGR: 13.921



Pipe insulation

Berner Pren Solar

- Closed, highly flexible synthetic rubber
- UV-resistant, free of as the Montreal Protocol mentioned halogen-containing substances, CFCs, HFCs, HCFCs, HCKW and no PVC

Application Area

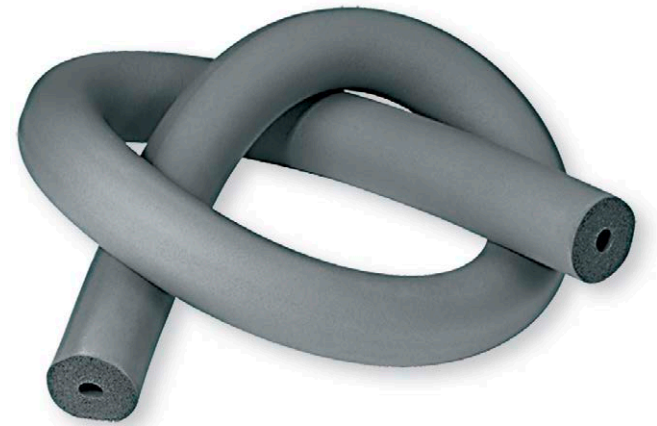
- For insulating and isolating solar systems, steam lines and tele-heating distributor lines

Characteristics

- Self extinguishing, does not conduct fire, not dropping

Technical Data

Temperature resistance	-50 °C - 150 °C
Fire Behavior	normally flammable according to DIN 4102



Technical Data	
Material	Closed celled, high flexible UV- resistant synthetic rubber
Heat Conduction	0.045 W/mk at +40 °C Middel Temperature according to DIN 52613
Temperature Resistance	-40 °C to +150 °C (short-termed up to +175 °C)
Fire Behaviour	B2 normal flammable acc. to DIN 4102
Material Color	Dark gray
Pipe Length	2 m

Title	Insulation Thickness	Pipe external Ø	Steel pipe nominal size, inch	Steel pipe nominal size, mm	Copper pipe nominal width, mm	Steel pipe external Ø	Copper pipe external Ø	PU m	Article No.
Berner-Pren Solar	19 mm	15 mm	1/4 "	8 mm	10 mm	13.5 mm	15 mm	64	134413*
Berner-Pren Solar	19 mm	18 mm	3/8 "	10 mm	15 mm	17.2 mm	18 mm	58	134415
Berner-Pren Solar	19 mm	22 mm	1/2 "	15 mm	20 mm	21.3 mm	22 mm	50	134416
Berner-Pren Solar	19 mm	28 mm	3/4 "	20 mm	25 mm	26.9 mm	28 mm	48	134417

* = The delivery time is 30 days
 AGR: 13.156

Pren solar strip

Application Area

- Isolation strip Pren Solar for the following up insulation of pipe connections

Characteristics

- Closed-cell, highly flexible synthetic rubber, self-extinguishing, does not conduct fire, not dripping

Technical Data

Temperature resistance	-50 °C - 90 °C
Fire Behavior	normally flammable according to DIN 4102
Length	15 m
Width	50 mm



Title	Insulation Thickness	PU m	Article No.
BERNER PREN SOLAR 15X50X3	3 mm	15	040939

AGR: 13.156

Pipe insulation

Berner Pren Strips

- manufactured CFC-free
- Berner-Pren consists of a closed-cell synthetic-rubber mixture
- the material is highly flexible and thus enables time-saving assembly
- Perfect dimensional stability and consistently high quality

Application Area

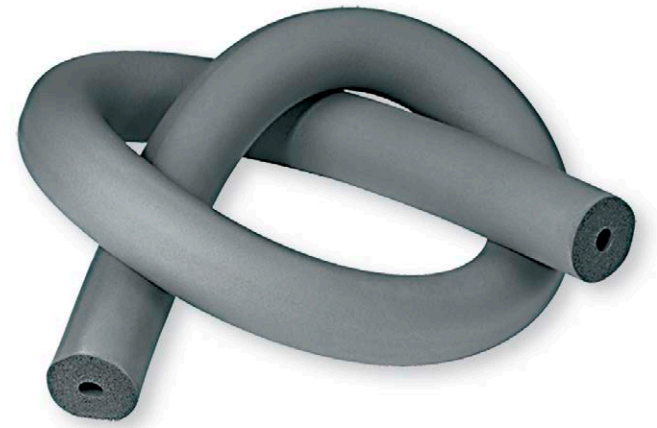
- Insulation of plumbing and heating systems

Processing Information

- Difficult processing points and thermal bridges are available with Berner-Pren not, tees e.g: can be easily customized without form and adjustment work
- Berner-Pren is simply pushed back before soldering and fixed by clamps
- Directs no fire, drip without burning and is self-extinguishing

Technical Data

Length	15 m
Width	50 mm



Title	Insulation Thickness	PU m	Article No.
Insulation rubber Strips AGR: 13.155	3 mm	15	857491

Berner Pren Solar Adhesive

Application Area

- Special high temperature adhesive for glueing of Berner-Pren Solar



Title	Color	Container	Content	PU Piece	Article No.
Pren Solar Adhesive 250 ml	Transparent	Can [3]	250 ml	1	041572

AGR: 13.156

Hinged Pipe Clamp G-ROHS

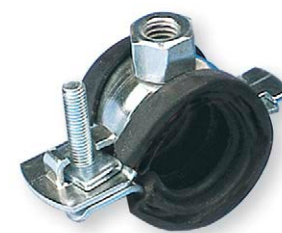
- Single-part joint enables quick installation
- Click mechanism with combined Phillips/flat-head screw
- Closes automatically when light pressure is applied
- Zinc plated for long-term corrosion protection
- Temperature range from -40 ° C to + 140 ° C
- Practical packaging with carton jars allows removal of the pipe clamps without removing the carton from the shelf

Application Area

- Fast and trouble-free pipe installation

Characteristics

- Sound insulating rubber insert for sound protection according to DIN 4109, sturdy steel strip, load bearing capacity up to 150 kg, tall nut guarantees a secure mounting



Carton with chute



Mount



Click



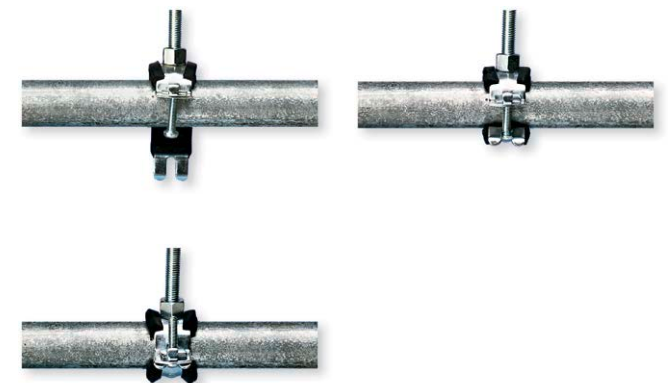
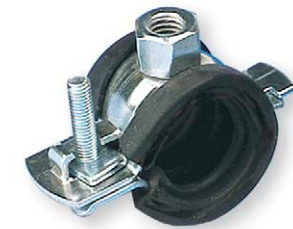
Tighten

Title	For pipe Ø	Threaded connection	Steel Pipe-Ø, Inch	Steel pipe Ø mini. in mm	Copper pipe external Ø	PU Piece	Article No.
Hinge pipe clamp G-ROHS	17.2 - 18 mm	M 8	3/8 "	17.2 mm	18 mm	1/150	249937

AGR: 13.300

Gel-pipe clamp

- Fast, simple and economical pipe clamp
 - ▶ Only one screw for easy assembly
- Optimal soundproofing according to DIN 4109
 - ▶ Ensured by rubber inlay of EPDM
- Very stable
 - ▶ Made of thick and wide material
 - ▶ Welded combi-nuts with connection thread for both M8 and M10 provide safe and stable mounting
- Resistant
 - ▶ Good corrosion protection due to galvanization
 - ▶ Temperature resistant from -40 to 140°C
- Silicone free



Title	For pipe Ø	Threaded connection	Max load capacity	Steel Pipe-Ø, Inch	Steel pipe Ø mini. in mm	Copper pipe external Ø	PU Piece	Article No.
ART.PIPE CL 8-10 M8/10	8 - 10 mm	M 8 / M 10	150 kg	-	-	8 - 10 mm	175	082698
ART.PIPE CL 15-16 M8/10	15 - 16 mm	M 8 / M 10	150 kg	-	-	15 mm	1/25/175	103452
PIPE CLAMP	15 - 18 mm	M 8 / M 10	150 kg	3/8 "	17.2 mm	16 - 18 mm	1/175	871363
ART.PIPE CL 17-19 3/8" M8/10	17 - 19 mm	M 8 / M 10	150 kg	3/8 "	17.2 mm	18 mm	1/25/150	103451
ART.PIPE CL 20-23 1/2" M8/10	20 - 23 mm	M 8 / M 10	150 kg	1/2 "	21.3 mm	22 mm	25/150	103450
SCR.PIPE 25-28 / 3/4" M8/10	25 - 28 mm	M 8 / M 10	150 kg	3/4 "	26.9 mm	28 mm	10/100	811297
ART.PIPE CL 32-35 1" M8/10	32 - 35 mm	M 8 / M 10	150 kg	1 "	33.7 mm	35 mm	10/75	103448
ART.PIPE CL 40-43 1 1/4" M8/10	40 - 43 mm	M 8 / M 10	150 kg	1 1/4 "	42.4 mm	42 mm	10/75	103447
ART.PIPE CL 44-49 1 1/2" M8/10	44 - 49 mm	M 8 / M 10	150 kg	1 1/2 "	48.3 mm	48 mm	10/50	103445
ART.PIPE CL 50-55 M8/10	50 - 55 mm	M 8 / M 10	150 kg	-	51 mm	54 mm	10/50	103444
ART.PIPE CL 54-58 M8/M10	54 - 58 mm	M 8 / M 10	-	1 3/4 "	-	57 mm	50	329044
ART.PIPE CL 59-64 M8/M10	64 - 69 mm	M 8 / M 10	-	2 "	-	65 - 69 mm	40	329045
PIPE CLAMP	74 - 80 mm	M 8 / M 10	150 kg	2 1/2 "	76.1 mm	75 - 80 mm	50	121868

AGR: 13.300

Pipe brackets

H-PC Quick

- For faster working
 - ▶ One-piece hinge joint enables quick assembly
- Perfect partners
 - ▶ click mechanism with combined cross-head screw
- Stable and versatile
 - ▶ M8/M10 combi-nut connector for safe and stable assembly
- Easy to use
 - ▶ Automatic closure with only light pressure
- Resistant to corrosion
 - ▶ Galvanised for long-term protection
- Super quiet
 - ▶ EPDM insert to absorb sound (DIN4109)
- Easy-access
 - ▶ cardboard access-flap allows removal of the pipe clamps without taking the packaging from the shelf



Technical Data

Material Steel (hot dip galvanized)

Title	For pipe Ø	Threaded connection	Max load capacity	Steel Pipe-Ø, Inch	Steel pipe Ø mini. in mm	Copper pipe external Ø	PU Piece	Article No.
Hinge pipe clamp G-ROHS	8 - 10 mm	M 8	75 kg	1/8 "	10.3 mm	10 mm	175	249535
Hinge pipe clamp G-ROHS	12 - 14 mm	M 8	75 kg	1/4 "	13.5 mm	12 mm	175	249935
Hinge pipe clamp G-ROHS	15 - 18 mm	M 8	75 kg	3/8 "	17.2 mm	18 mm	175	249936
Hinge pipe clamp G-ROHS	20 - 23 mm	M 8	75 kg	1/2 "	21.3 mm	22 mm	150	249938
Hinge pipe clamp G-ROHS	25 - 28 mm	M 8	75 kg	3/4 "	26.9 mm	28 mm	100	249941
Hinge pipe clamp G-ROHS	32 - 35 mm	M 8	75 kg	1 "	33.7 mm	35 mm	75	249942
Hinge pipe clamp G-ROHS	40 - 43 mm	M 8	75 kg	1 1/4 "	42.4 mm	42 mm	75	249943
Hinge pipe clamp G-ROHS	44 - 49 mm	M 8	75 kg	1 1/2 "	48.3 mm	48 mm	50	249944
Hinge pipe clamp G-ROHS	50 - 55 mm	M 8	75 kg	-	51 mm	54 mm	50	249945
PIPE CLAMP G-ROHS 59-64	59 - 64 mm	M 8 / M 10	75 kg	2 "	60.3 mm	64 mm	40	329129
Hinged Pipe Clamp	74 - 80 mm	M 8 / M 10	75 kg	2 1/2 "	76.1 mm	76 mm	50	001052
H-PC Quick	108 - 114 mm	M 8 / M 10	75 kg	4 "	108 mm	108 mm	25	121870

AGR: 13.800

Stapler Device

- Simple one-hand operation
- No bending down as the hand-grip is at 80 cm height
- Optimal pipe guidance during the installation thanks to the long holding grip
- Very robust and stable version

Characteristics

- Made of aluminium and zinc plated steel, with spring beared ball (pin stopper) – thus optimal function adjustment



Title	Height	PU Piece	Article No.
Stapler	900 mm	1	051063
AGR: 13.306			
Necessary Accessories		PU Piece	Article No.
Stapler Pin with Double Hook		300	051064

Pipe brackets

Staples

- Secure anchoring under the masking foil by the special tilt anchor technique
- With double barb – so the pipe holds perfect on the insulation
- For all masked surfaces
- Can be used in most staplers (e.g. Roth, Remo)

Application Area

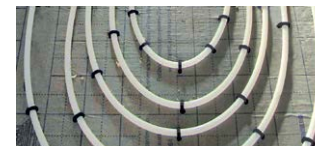
- For fast and uncomplicated installation of floor and central heating systems

Processing Information

- Pro laying 4-6 meters clips, staples per single family about 500-1,000

Hints

- For all 14-20mm pipe types and dimensions

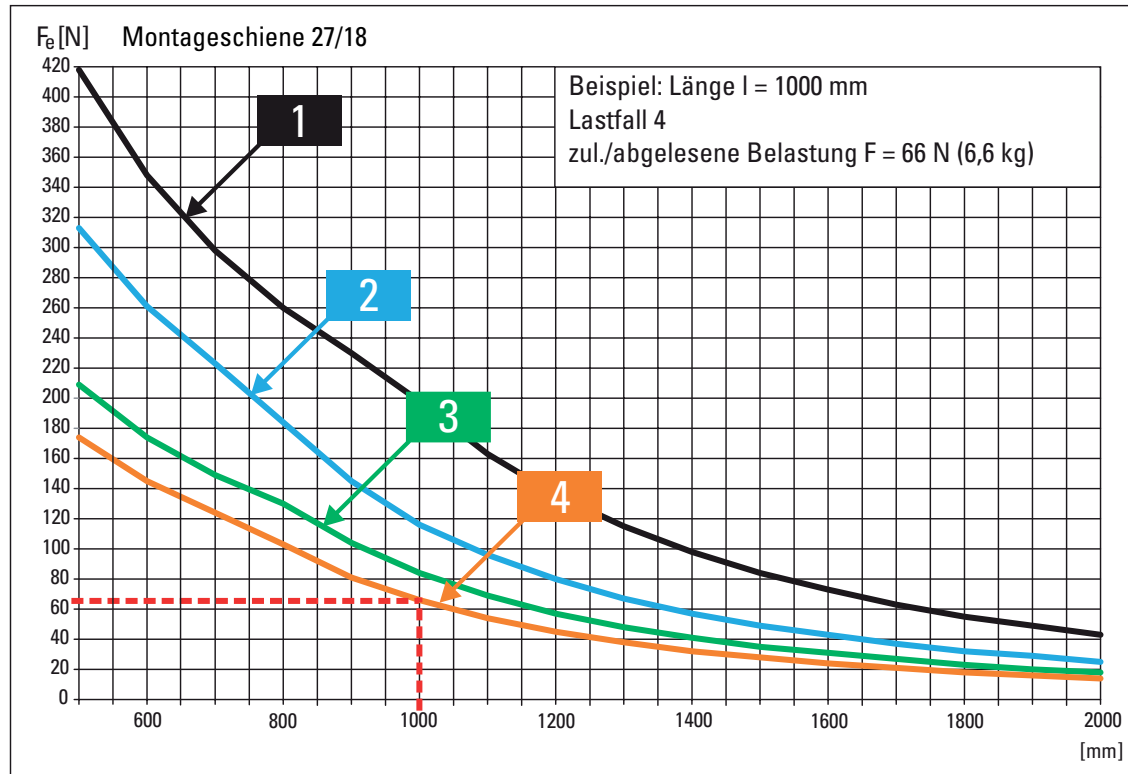


Title	Height	For pipe Ø	PU Piece	Article No.
Stapler Pin with Double Hook	40 mm	20 mm	300	051064

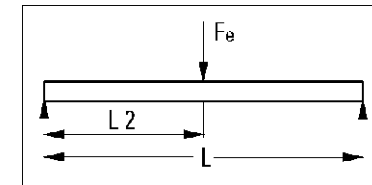
AGR: 13.306

Necessary Accessories	PU Amount	Article No.
Stapler	1	051063

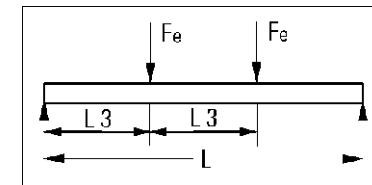
Tragfähigkeit Montageschienen 27/18 und 30/15



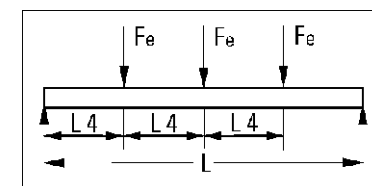
Lastfall 1



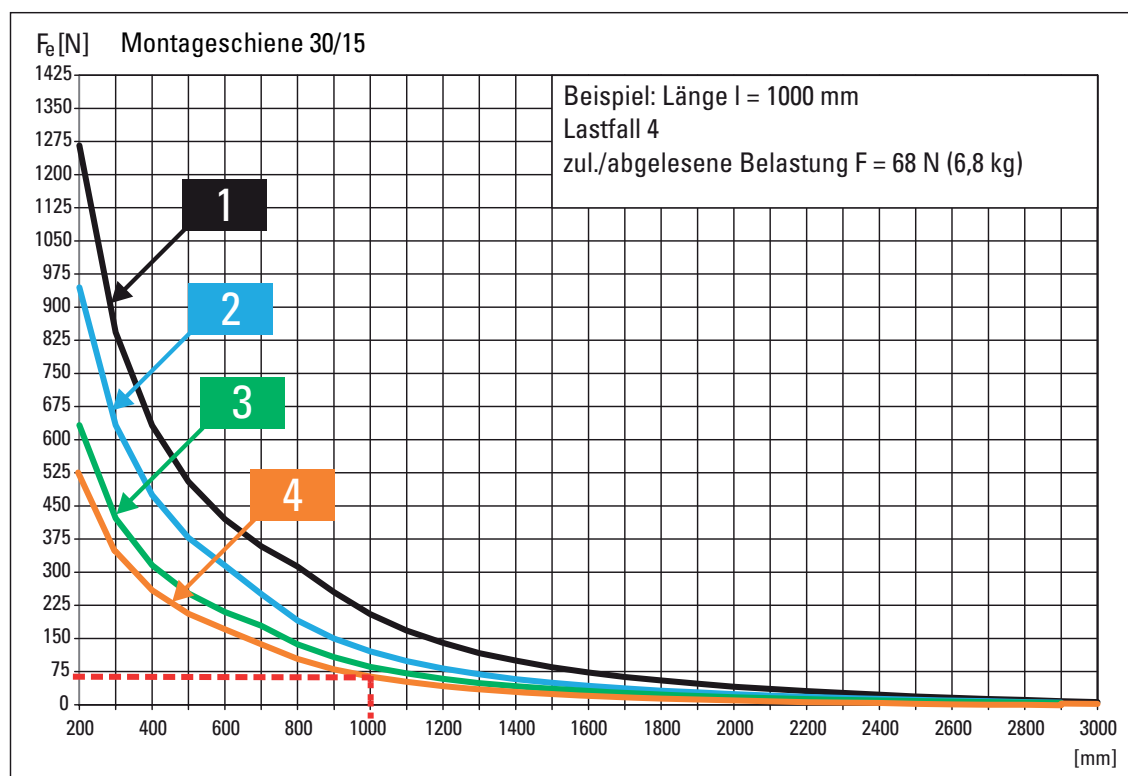
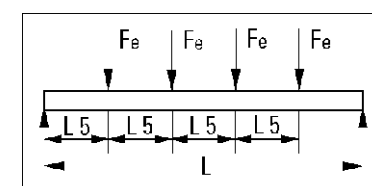
Lastfall 2



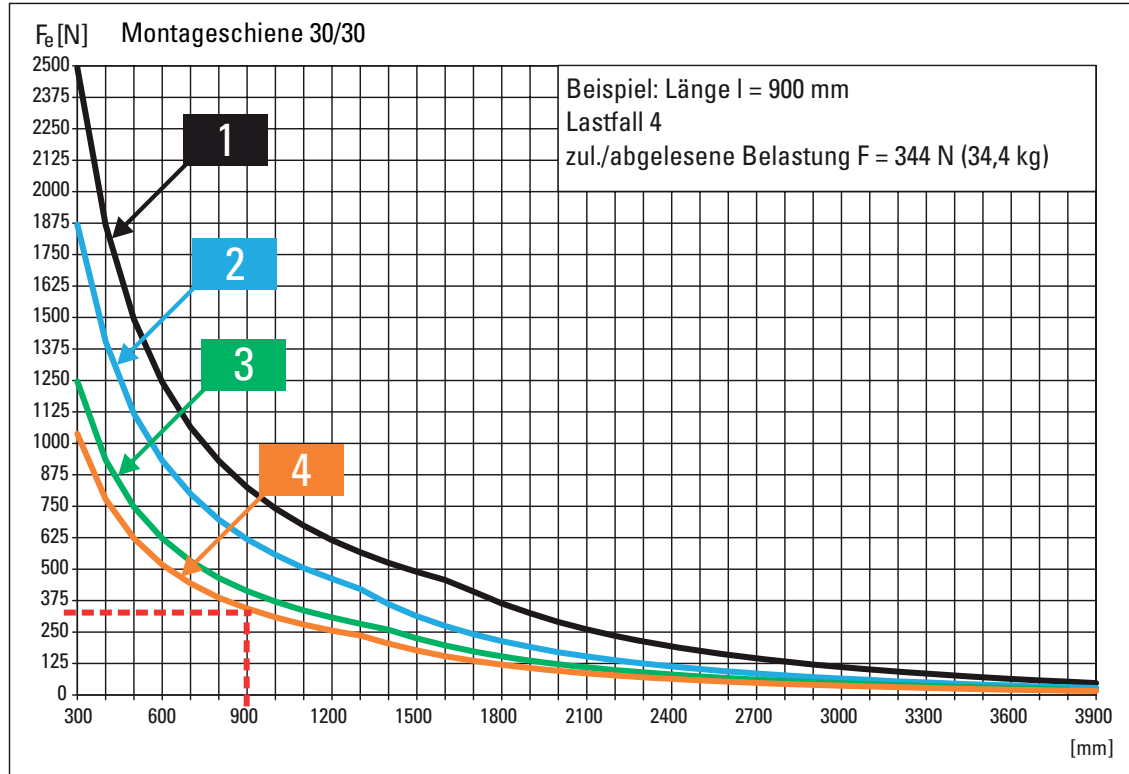
Lastfall 3



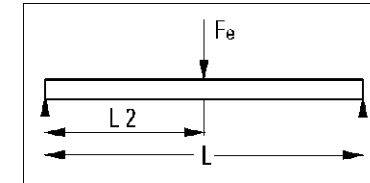
Lastfall 4



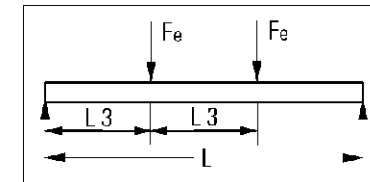
Tragfähigkeit Montageschienen 30/30 und 38/40



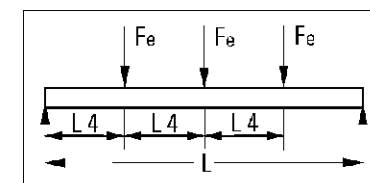
Lastfall 1



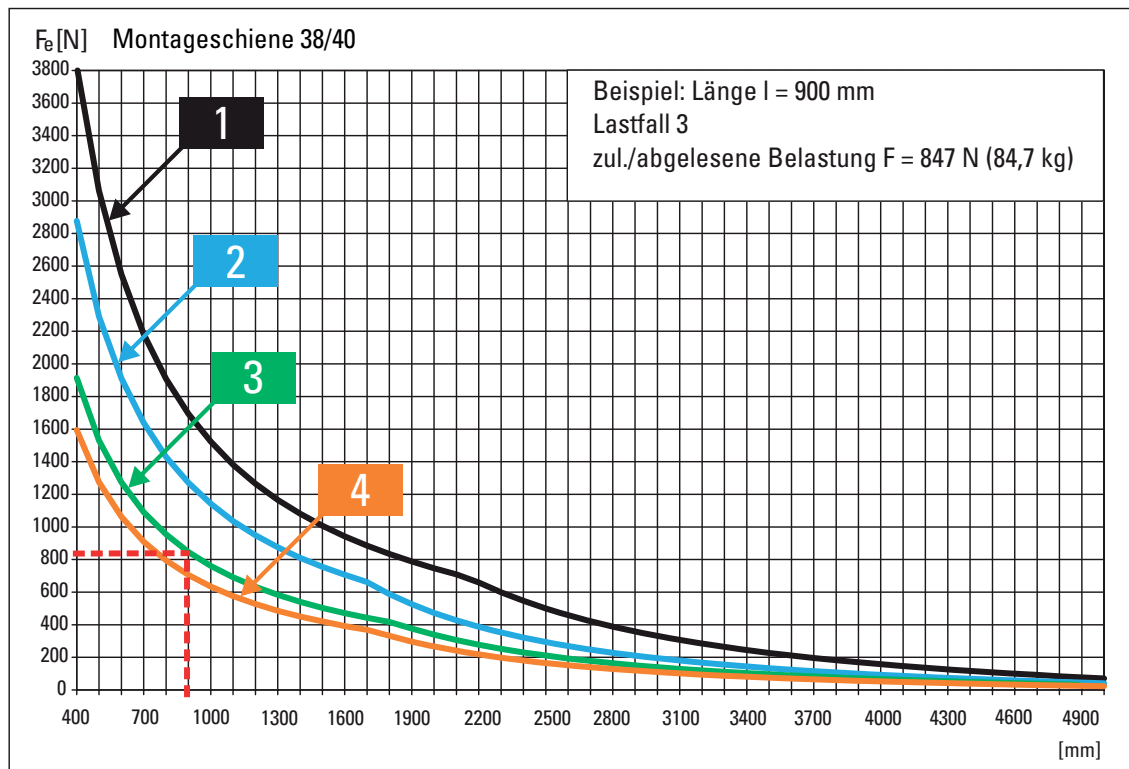
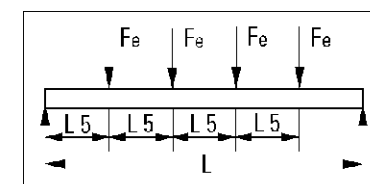
Lastfall 2



Lastfall 3



Lastfall 4



Schienensysteme und Zubehör

SMS Montageschienen

Hauptanwender

Elektro- und Installationsbetriebe, Heizungstechnik, Sanitärhandwerk

Produktvorteile

- Durchgehend gelocht für individuelle Befestigung
- Korrosionsschutz durch Sendzimirverzinkung
- Montagesystem mit durchgehender Lochung für kostengünstige Verlegung von Rohrtrassen



Maße und Gewichte von Rohren

Gewinderohr nach DIN 2440

Hinweise

- Längenausdehnungskoeffizient: $a = 0,0120 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,0120 \text{ mm/m} \cdot \text{K}$$

$$L = 6,00 \text{ mm}$$

DN	Größe	Außen-Ø mm	Wandstärke mm	Rohrgewicht			mit Isolierung kg/m	Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m	Wassergefüllt kg/m		
8	1/4"	13,5	2,35	0,68	0,061	0,741	1,0	-
10	3/8"	17,2	2,35	0,89	0,123	1,013	1,3	2,25
15	1/2"	21,3	2,65	1,27	0,201	1,471	1,8	2,75
20	3/4"	26,9	2,65	1,65	0,366	2,016	2,4	3,00
25	1"	33,7	3,25	2,55	0,581	3,131	3,9	3,50
32	1.1/4"	42,4	3,25	3,28	1,012	4,292	5,7	3,75
40	1.1/2"	48,3	3,25	3,77	1,372	5,142	6,6	4,25
50	2"	60,3	3,65	5,33	2,205	7,535	9,9	4,75
65	2.1/2"	76,1	3,65	6,80	3,716	10,516	15,0	5,50
80	3"	88,9	4,05	8,85	5,125	13,975	19,9	6,00
100	4"	114,3	4,50	12,60	8,704	21,304	30,9	6,00
125	5"	139,7	4,85	16,90	13,267	30,167	40,6	6,00
150	6"	165,1	4,85	20,10	18,958	39,057	50,4	6,00

Stahlrohre (Siederohre) nach DIN 2448

Hinweise

- Längenausdehnungskoeffizient $a = 0,0120 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,0120 \text{ mm/m} \cdot \text{K}$$

$$L = 6,00 \text{ mm}$$

DN	Größe	Außen-Ø mm	Wandstärke mm	Rohrgewicht			mit Isolierung kg/m	Aufhängeabstand
				leer kg/m	Wasserinhalt l/m	Wassergefüllt kg/m		
8	1/4"	13,5	1,80	0,522	0,077	0,599	1,2	2,00
		16,0	1,80	0,632	0,121	0,753	1,4	2,00
10	3/8"	17,2	1,80	0,688	0,145	0,833	1,5	2,25
		20,0	2,00	0,890	0,201	1,091	2,1	2,25
15	1/2"	21,3	2,00	0,962	0,235	1,197	2,5	2,75
		25,0	2,00	1,130	0,346	1,476	2,8	2,75
20	3/4"	26,9	2,30	1,410	0,390	1,800	3,2	3,00
		30,0	2,60	1,770	0,483	2,253	3,7	3,00
		31,8	2,60	1,880	0,555	2,435	4,1	3,00
25	1"	33,7	2,60	2,010	0,638	2,648	4,3	3,50
		38,0	2,60	2,290	0,845	3,135	4,8	3,50
32	1.1/4"	42,4	2,60	2,570	1,086	3,656	5,5	3,75
		44,5	2,60	2,700	1,212	3,912	5,8	3,75
40	1.1/2"	48,3	2,60	2,950	1,458	4,408	6,0	4,25
		51,0	2,60	3,120	1,647	4,767	6,5	4,25
		57,0	2,90	3,900	2,058	5,958	7,6	4,25
50	2"	60,3	2,90	4,140	2,332	6,472	9,0	4,75
		63,5	2,90	4,360	2,614	6,974	9,5	4,75
		70,0	2,90	4,830	3,235	8,065	11,5	4,75
65	2.1/2"	76,1	2,90	5,280	3,880	9,160	13,9	5,50
		82,5	3,20	6,310	4,546	10,856	15,2	5,50
80	3"	88,9	3,20	6,810	5,343	12,153	18,4	6,00
		101,6	3,60	8,760	6,995	15,755	24,8	6,00
		108,0	3,60	9,330	7,976	17,306	27,5	6,00
100	4"	114,3	3,60	9,900	9,004	18,904	28,8	6,00
		127,0	4,00	12,200	11,116	23,316	35,1	6,00
		133,0	4,00	12,800	12,266	25,066	36,5	6,00
125	5"	139,7	4,00	13,500	13,616	27,116	38,2	6,00
		152,4	4,50	16,400	16,142	32,542	46,5	6,00
		159,0	4,50	17,100	17,663	34,763	48,9	6,00
150	6"	165,1	4,50	17,800	19,128	36,928	-	6,00
		168,3	4,50	18,100	19,921	38,021	50,6	6,00
		177,8	5,00	21,300	22,103	43,403	58,9	6,00
		193,7	5,40	25,000	26,260	51,260	66,5	6,00

Kupferrohre nach DIN EN 1057

Hinweise

- Längenausdehnungskoeffizient: $a = 0,0166 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,0166 \text{ mm/m} \cdot \text{K}$$

$$L = 8,30 \text{ mm}$$

DN	Innen-Ø mm	Außen-Ø mm	Wandstärke mm	Rohrgewicht		Wassergefüllt kg/m	mit Isolierung kg/m	Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m			
8	8,0	10,0	1,00	0,252	0,050	0,302	0,4	1,00
10	10,0	12,0	1,00	0,308	0,079	0,387	0,5	1,25
12	13,0	15,0	1,00	0,391	0,133	0,524	0,8	1,25
15	16,0	18,0	1,00	0,475	0,201	0,676	1,0	1,50
20	20,0	22,0	1,00	0,587	0,314	0,901	1,3	2,00
20	20,0	22,0	1,50	0,860	0,283	1,143	1,5	2,25
25	25,0	28,0	1,50	1,110	0,491	1,601	2,4	2,25
32	32,0	35,0	1,50	1,410	0,804	2,214	3,1	2,75
40	39,0	42,0	1,50	1,700	1,194	2,894	4,4	3,00
50	50,0	54,0	2,00	2,910	1,963	4,873	7,3	3,50
	60,0	64,0	2,00	3,470	2,826	6,296	9,8	4,00
	70,0	70,0	2,00	3,800	3,419	7,219	12,0	4,00
65	72,1	76,1	2,00	4,140	4,081	8,221	14,0	4,25
80	84,9	88,9	2,00	4,870	5,658	10,528	16,4	4,75
100	104,0	108,0	2,00	7,380	8,328	15,708	27,5	5,00
125	127,0	133,0	3,00	10,900	12,261	23,561	35,8	5,00
150	153,0	159,0	3,00	13,100	18,376	31,476	43,5	5,00

Abflussrohre PVC hart nach DIN 19532 und DIN 8063

Hinweise

- Längenausdehnungskoeffizient: $a = 0,08 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,08 \text{ mm/m} \cdot \text{K}$$

$$L = 40,00 \text{ mm}$$

DN	Innen-Ø mm	Außen-Ø mm	Wandstärke mm	Rohrgewicht		Wassergefüllt kg/m	mit Isolierung kg/m	Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m			
40	46,4	50,0	1,80	0,420	1,691	2,111	-	1,10
50	59,2	63,0	1,90	0,560	2,752	3,312	-	1,20
70	70,6	75,0	2,20	0,780	3,914	4,694	-	1,35
100	103,6	110,0	3,20	1,640	8,428	10,068	-	1,70
125	132,6	140,0	3,70	2,130	13,807	15,937	-	1,95
150	150,6	160,0	4,70	3,440	17,810	21,250	-	2,10

Abflussrohre PE (Geberit)

Hinweise

- Längenausdehnungskoeffizient: $a = 0,20 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,20 \text{ mm/m} \cdot \text{K}$$

$$L = 100,00 \text{ mm}$$

DN	Innen-Ø mm	Außen-Ø mm	Wandstärke mm	Rohrgewicht			mit Isolierung kg/m	Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m	Wassergefüllt kg/m		
26,0	32,0	3,00		0,273	0,531	0,804	-	0,32
34,0	40,0	3,00		0,348	0,908	1,256	-	0,40
40	44,0	50,0	3,00	0,443	1,520	1,963	-	0,50
50	50,0	56,0	3,00	0,500	1,963	2,463	-	0,56
60	57,0	63,0	3,00	0,566	2,551	3,117	-	0,63
70	69,0	75,0	3,00	0,679	3,739	4,418	-	0,75
80	83,0	90,0	3,50	0,952	5,410	6,362	-	0,90
100	101,4	110,0	4,30	1,432	8,074	9,506	-	1,10
125	115,2	125,0	4,90	1,817	10,421	12,238	-	1,25
150	147,6	160,0	6,20	3,004	17,107	20,111	-	1,60
200	187,6	200,0	6,20	3,830	27,636	31,466	-	2,00
250	234,4	250,0	7,80	6,019	43,144	49,163	-	2,50
300	295,4	315,0	9,80	9,655	68,522	78,177	-	3,15

Abflussrohre Gusseisen, SML

Hinweise

- Längenausdehnungskoeffizient $a = 0,0105 \text{ mm/m} \cdot \text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,0105 \text{ mm/m} \cdot \text{K}$$

$$L = 5,25 \text{ mm}$$

DN	Innen-Ø mm	Außen-Ø mm	Wandstärke mm	Rohrgewicht			mit Isolierung kg/m	Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m	Wassergefüllt kg/m		
50	51,0	58,0	3,50	4,300	2,042	6,342	-	1,50
70	71,0	78,0	3,50	5,900	3,958	9,858	-	1,50
100	103,0	110,0	3,50	8,400	8,331	16,731	-	1,50
125	127,0	135,0	4,00	11,800	12,665	24,465	-	1,50
150	152,0	160,0	4,00	14,100	18,142	32,242	-	1,50
200	200,0	210,0	5,00	23,100	31,410	54,510	-	1,50
250	263,0	274,0	5,50	33,300	54,315	87,615	-	1,50
300	314,0	326,0	6,00	43,200	77,423	120,623	-	1,50

Edelstahlrohre nach DIN 1127, Reihe 1

Hinweise

- Längenausdehnungskoeffizient: $a = 0,0165 \text{ mm/m}^{\circ}\text{K}$
- Beispiel: 10 m Rohr und Temperaturunterschied von 50°K

Formel:

$$L = L \cdot T \cdot a$$

$$L = 10 \text{ m} \cdot 50 \text{ K} \cdot 0,0165 \text{ mm/m}^{\circ}\text{K}$$

$$L = 8,25 \text{ mm}$$

DN	Innen-Ø mm	Außen-Ø mm	Wandstärke mm	Rohrgewicht				Aufhängeabstand max. m
				leer kg/m	Wasserinhalt l/m	Wassergefüllt kg/m	mit Isolierung kg/m	
10	10	17,2	-	0,630	0,150	0,780	1,45	2,25
15	15	21,3	-	0,970	0,240	1,210	2,50	2,75
20	20	26,9	-	1,250	0,410	1,660	3,10	3,00
25	25	33,7	-	1,580	0,690	2,270	4,00	3,50
32	32	42,4	-	2,020	1,160	3,180	4,80	3,75
40	40	48,3	-	2,310	1,540	3,850	5,45	4,25
	60	60,3	-	2,920	2,490	5,410	7,95	4,75
65	65	76,1	-	3,700	4,080	7,780	12,50	5,50
80	80	88,9	-	4,350	5,660	10,010	16,25	6,00
	110	114,3	-	7,270	9,350	16,620	26,50	6,00
	140	139,7	-	8,920	14,210	23,130	34,00	6,00
	170	168,3	-	13,200	20,890	34,090	47,75	6,00
200	200	219,1	-	17,300	35,530	52,830	67,50	6,00
	270	273,0	-	21,600	58,540	80,140	96,50	6,00
	320	323,9	-	25,700	82,400	108,100	127,25	6,00
400	400	406,4	-	32,300	129,720	162,020	185,50	6,00
500	500	508,0	-	40,400	202,680	243,080	268,00	6,00

Mounting Rail 27/18

- Fast and rational mounting of pipe lines and pipe sections
- Support construction for ventilation ducts
- Mounting possibilities for on-wall installations and shelves in conjunction with the system components
- Independent fastening due to consistent holes

Characteristics

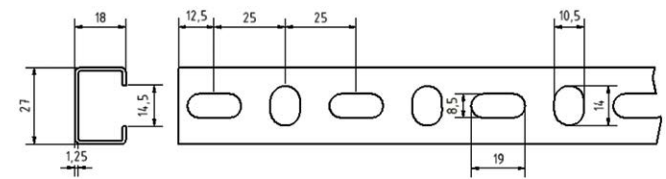
- Steel DX 51 D (according to EN 10142)
- Sendzimir zinc plated (15-20µm)

Technical Data

Profile	27/18
Material	Steel

Title	Thickness	Length	Width	Height	Width Of The Opening	PU m	Article No.
Assembly Rail	1.25 mm	2 m	27 mm	18 mm	14.5 mm	2/24	059404

AGR: 13.310



Mounting Rail 30/15

- Fast and rational mounting of pipe lines and pipe sections
- Support construction for ventilation ducts
- Mounting possibilities for on-wall installations and shelves in conjunction with the system components
- Independent fastening due to consistent holes

Characteristics

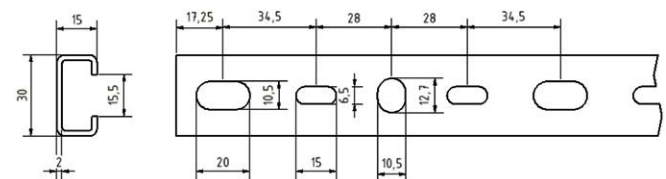
- Steel DX 51 D (according to EN 10142)
- Sendzimir zinc plated (15-20µm)

Technical Data

Profile	30/15
Material	Steel

Title	Thickness	Length	Width	Height	Width Of The Opening	PU m	Article No.
Mounting Rail	2 mm	2 m	30 mm	15 mm	15.5 mm	2/12	059408

AGR: 13.310



INTERNAL/Approved (2019-03-23 01:36:15)

Mounting Rail 30/30

- Fast and rational mounting of pipe lines and pipe sections
- Support construction for ventilation ducts
- Mounting possibilities for on-wall installations and shelves in conjunction with the system components
- Independent fastening due to consistent holes

Characteristics

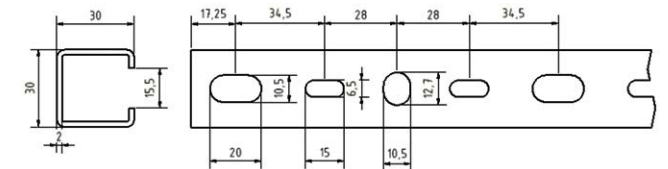
- Steel DX 51 D (according to EN 10142)
- Sendzimir zinc plated (15-20µm)

Technical Data

Profile	30/30
Material	Steel zinc plated

Title	Thickness	Length	Width	Height	Width Of The Opening	PU m	Article No.
Assembly Rail	2 mm	3 m	30 mm	30 mm	15.5 mm	3/18	059407

AGR: 13.310



Mounting Rail 41/41

- Fast and rational mounting of pipe lines and pipe sections
- Support construction for ventilation ducts
- Mounting possibilities for on-wall installations and shelves in conjunction with the system components
- Independent fastening due to consistent holes

Characteristics

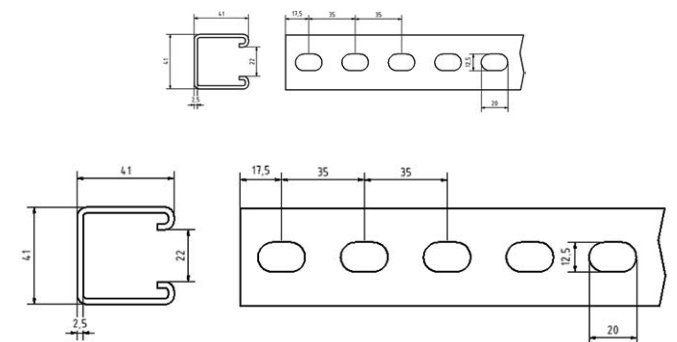
- Steel DX 51 D (according to EN 10142)
- Sendzimir zinc plated (15-20µm)

Technical Data

Profile	41/41
Material	Metal

Title	Thickness	Length	Width	Height	PU m	Article No.
Assembly Rail	2.5 mm	3 m	41 mm	41 mm	3/9	059413

AGR: 13.310



Rapid Fasteners

- Two-Finger rapid mounting to rail systems
- Pre-mounted massive complete solution
- Distance adjustable thread pin
- High loading capacity
- Rapid, flexible alignment

Technical Data

Material Steel zinc plated



Title	For mounting rail	Thread	Length	PU Piece	Article No.
Quick Fastener	27/18	M 8	30 mm	50	059427
	30/15				
	30/30				
Quick Fastener	27/18	M 8	60 mm	50	059428
	30/15				
	30/30				
Quick Fastener	27/18	M 8	100 mm	50	059429
	30/15				
	30/30				
Quick Fastener	27/18	M 8	120 mm	25/50	059430
	30/15				
	30/30				

AGR: 13.312

Accessories Available

PU Piece Article No.

INTERNAL/Approved (2019-03-23 01:36:53)

Quick Fastener "Topscrew"

- Two-finger quick assembly on rail systems
- Optimum hold due to locking on special tothing of the rail
- No shifting due to spring tension
- Pre-assembled solid complete solutions
- High loading capacity
- Fast and flexible alignment

Technical Data

Material Steel zinc plated



Title	For mounting rail	Thread	Length	PU Piece	Article No.
Quick Fastener "Topscrew"	41/22 41/41	M 10	60 mm	50	059440

AGR: 13.312

Quick Fastener without Thread Pin

- No displacement thanks to tension spring
- More flexibility – different lengths of thread pins can be mounted

Technical Data

Material Steel zinc plated



Title	For mounting rail	Thread	PU Piece	Article No.
Quick Fastener	27/18	M 10	50	059431
	30/15			
	30/30			
Quick Fastener	27/18	M 8	75	059426
	30/15			
	30/30			

AGR: 13.312

Sliding Nut

Application Area

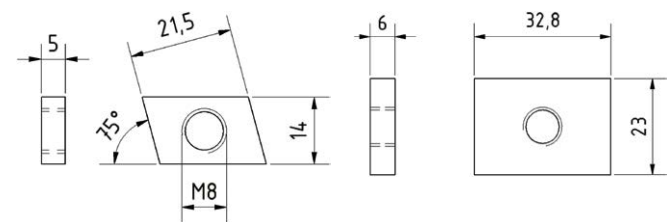
- Mounting rail

Characteristics

- Steel zinc plated

Technical Data

Material Steel zinc plated



Title	Thread	For mounting rail	Width	Length	PU Piece	Article No.
Sliding nut	M 8	27/18 30/30 28/30	14 mm	21.5 mm	100	059458
Sliding nut	M 8	38/40 40/60	23 mm	32.8 mm	100	059460
Sliding nut	M 10	38/40 40/60	23 mm	32.8 mm	100	059461

AGR: 13.313

System Bolts

- The threaded piece remains adjustable during assembly - so the wall-ceiling distance can be gradually adjusted.

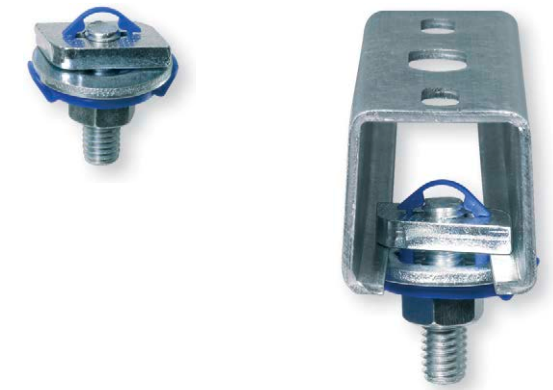


Rail mounting systems

- Fast assembly thanks to clamping spring, but still remains adjustable.
- More flexibility with individual sliding butts M 8 and M 10 in order to mount individual stud bolts.

Scope Of Delivery

- Complete with pre-assembled nut, washer and plastic ring



Technical Data

Material Steel zinc plated

Title	For mounting rail	Thread	Length	PU Piece	Article No.
System Bolts	27/18	M 8	30 mm	100	031554
	30/15				
	30/30				
System Bolts	27/18	M 8	40 mm	75	031555
	30/15				
	30/30				
System Bolts	27/18	M 8	60 mm	75	031556
	30/15				
	30/30				

AGR: 13.312

Rail mounting systems

Consoles

- Clean optical view.

Application Area

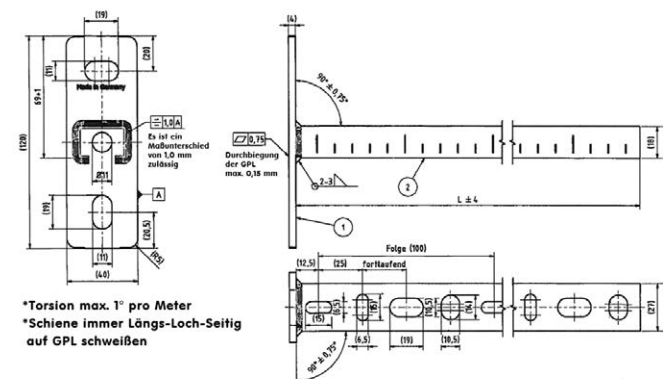
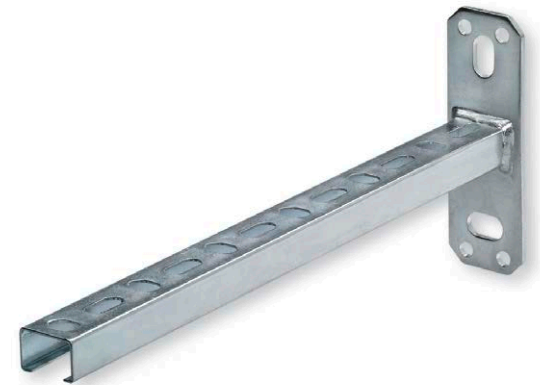
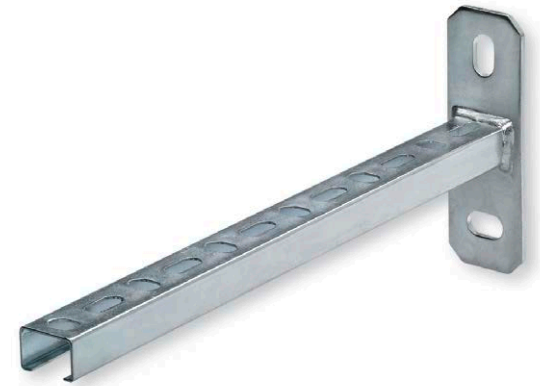
- Bearing constructions for pipe paths, tap ware, aeration channels and aeration devices
- Can be used with cross bars for pipe fixations in connection with rail holders
- Consoles can be mounted on the floor, wall and ceiling

Characteristics

- Surface: galvanically zinc plated approx. 8 – 12 μm

Technical Data

Material	Steel zinc plated
----------	-------------------



Title	Length total (mm)	Wall mounting height	For mounting rail	Maximum load	PU Piece	Article No.
Console	300 mm	120 mm	27/18	0.31 kN	1	059488
Console	315 mm	-	41/41	1.74 kN	1	059496
Console	375 mm	120 mm	30/30	0.52 kN	1	059491
Console	500 mm	120 mm	30/30	0.39 kN	1	059492
Console	630 mm	120 mm	41/41	0.35 kN	1	059497

AGR: 13.311

Saddle Flange

- All-round welding seam
- Long hole and phillips hole in the base plate for a simple alignment
- Optimal load conduction by the stable saddle connection

Application Area

- Easy mounting of the rails at cross-connections
- Ideal for use in narrow places
- Also suitable for the difficult assembly by the variable arrangement of the support plates

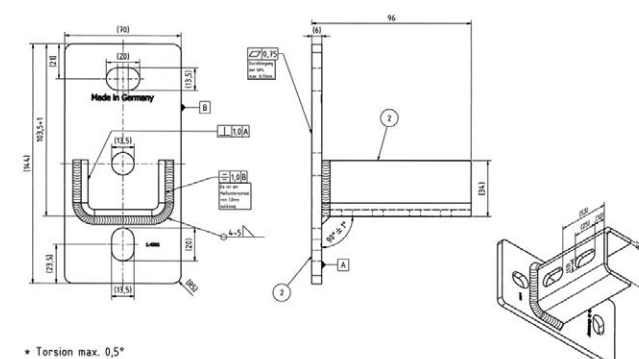
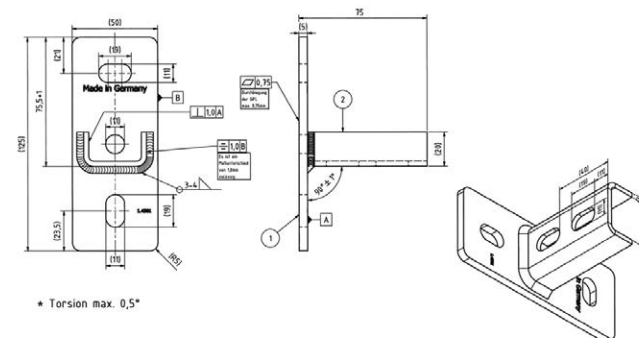
Characteristics

- Steel zinc plated

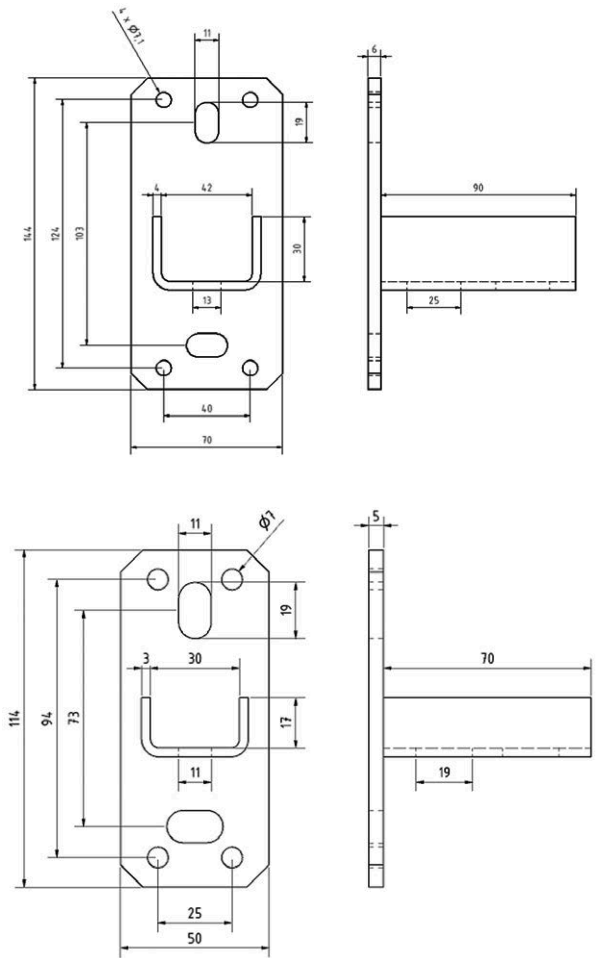
Technical Data

Material

Steel zinc plated



Rail mounting systems



Title	For mounting rail	PU Piece	Article No.
Saddle Flange 27/18, 30/15, 30/30	27/18 30/15 30/30	10	059483

AGR: 13.311

INTERNAL/Approved (2019-03-23 01:37:33)

Nail anchor N-M with threaded socket

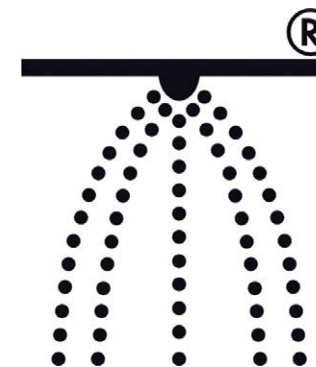
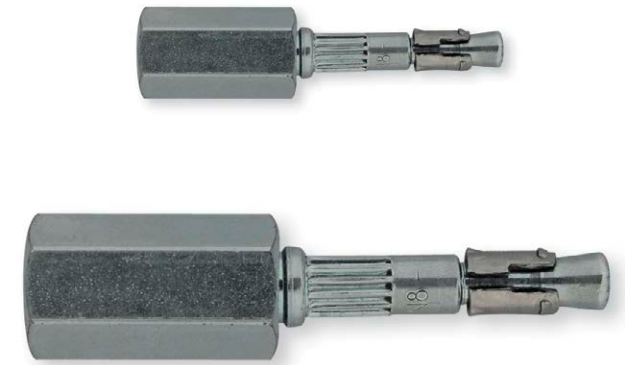
- European technical certification for multiple fixing in cracked concrete
- Fast and easy mounting; Only hammering
- Reduced anchorage depth
- Very small edge and axis distance
- Valid weight up to 2,81 kN
- Only one product for 2 applications: M8/M10-combination threaded socket

Characteristics

- 6x25 mm with threaded socket M8/M10
- electrogalvanized

Hints

- With the dual thread M8/M10 it is possible to use one anchor with M8 and M10 threaded rods.
Fast and simple mounting. Anchor is simply hammered through the fixture into the concrete.
Applying torque is not necessary in the threaded versions.
When the load is applied the Nail Anchor expands automatically and anchors to the concrete.



Title	Dimension	Thread	Drill hole-Ø	Effect. anchor depth	Min. Drill hole depth	PU Piece	Article No.
NAILANCHOR N-M	6 x 58 mm	6	6 mm	25 mm	35 mm	100	214935

AGR: 05.701

Rail Connector

- Fast butt-joint connection of mounting rails
- Power-grip connection, exact alignment of the rail
- Problemless mounting by inserting into the rail profile
- Connection by clips in the rail slot

Application Area

- Extension of rails and consoles



Title	For mounting rail	PU Piece	Article No.
Rail Connector	27/18 30/15 30/30	25	059484*

* = The delivery time is 14 days

AGR: 13.313

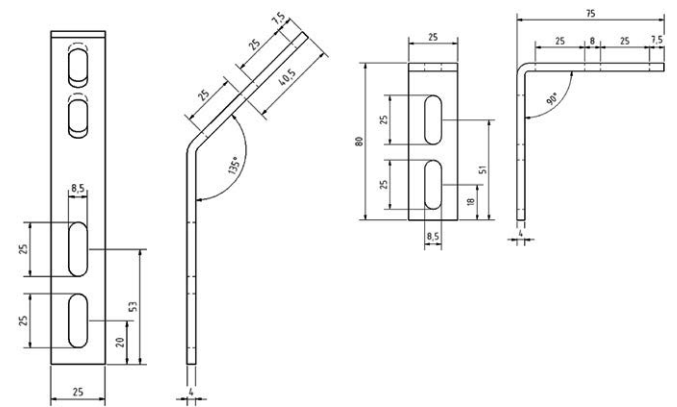
System Bracket

Application Area

- Multiple uses
- As support bracket/connection element
- As bracket console/mounting bracket

Characteristics

- Steel (zinc plated)



Title	Angle	For mounting rail	PU Piece	Article No.
System Bracket	90 °	38/40	25	059481
		41/22		
		41/41		
System Bracket	90 °	27/18	50	059479
		30/15		
		30/30		

AGR: 13.316

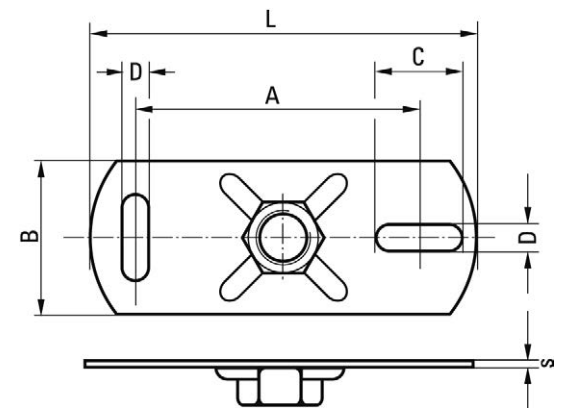
Base Plate

Application Area

- Wall, ceiling and floor attachment of pipe sections and brackets

Characteristics

- Steel (galvanized)
- M 8 / M 10 combi thread



Title	Distance between mounting holes	Width (B)	Mounting hole width or diameter	Mounting hole length	L	For screw-Ø	PU Piece	Article No.
Base Plate M8/M10	29 mm	55 mm	9 mm	18 mm	80 mm	M 8	25/100	111989
Base Plate	79 mm	40 mm	11 mm	19 mm	120 mm	-	1/50	120781
Base Plate	79 mm	40 mm	11 mm	19 mm	120 mm	-	1/50	120783

AGR: 13.335

Support Clamps

Application Area

- For single fixations at steel beams
- Mounting without drilling and welding

Characteristics

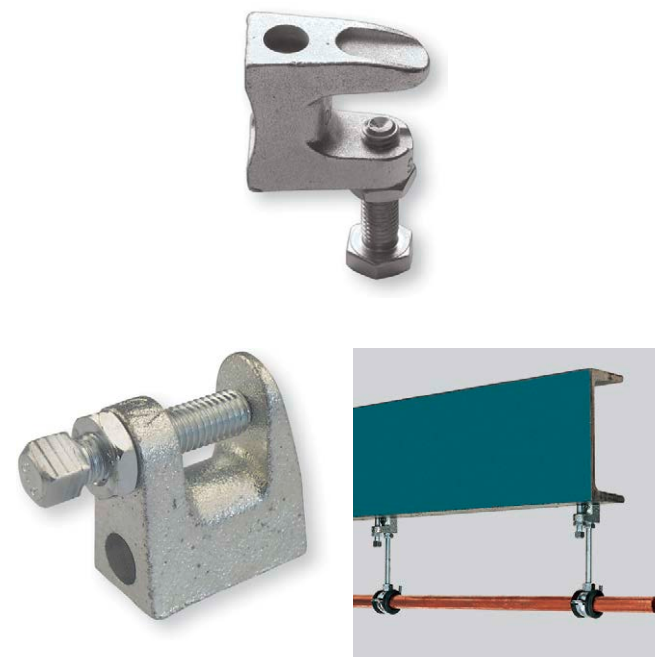
- Steel zinc plated

Technical Data

Material	Steel zinc plated		
Maximum load	1.2 kN		2.5 kN

Title	For screw-Ø	PU Piece	Article No.
Support Clamps	M 8	50	032787
Support Clamps	M 10	50	032788

AGR: 13.333



Parallel Connector

- Threaded Rod extension for suspended construction applications
- Infinitely adjustable in height
- Maximum load approximately 3,000 N

Application Area

- Extension of thread bars for suspensions

Technical Data

Material	Steel		
----------	-------	--	--

Title	Thread	PU Piece	Article No.
Parallel Connector	M 10	50	059514

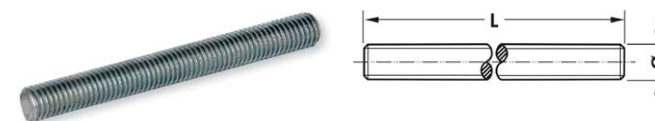
AGR: 00.256



Stud bolts DIN 976-1, shape A, steel 4.6, zinc plated

Characteristics

- Form A = without crests



Hints

- Item No. 126940 (10x35), 126 942 (10x45), 126953 (10x180), 126954 (10x190) and 126 955 (10x200) are the form B (with conical studs)

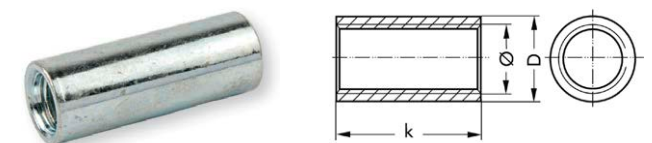
Thread	M 8	M 10
Thread Pitch mm	1.25 mm	1.5 mm

Stud bolts DIN 976-1, shape A, steel 4.6, zinc plated			Stud bolts DIN 976-1, shape A, steel 4.6, zinc plated			Stud bolts DIN 976-1, shape A, steel 4.6, zinc plated		
Dimensions	PU Piece	Article No.	Dimensions	PU Piece	Article No.	Dimensions	PU Piece	Article No.
M 8 x 25	100	126050	M 8 x 140	100	126067*	M 10 x 130	100	126950*
M 8 x 30	100	126937*	M 8 x 150	100	126068*	M 10 x 140	100	126951*
M 8 x 40	100	126051	M 10 x 30	100	126939*	M 10 x 150	100	126952*
M 8 x 50	100	126052	M 10 x 40	100	126941*	x	25	126953*
M 8 x 60	100	126938*	M 10 x 50	100	126943*	x	25	126954*
M 8 x 70	100	126053*	M 10 x 60	100	126944*	x	10	126955*
M 8 x 80	100	126060	M 10 x 70	100	126945*	x	100	126940*
M 8 x 90	100	126061*	M 10 x 80	100	126946*	x	100	126942*
M 8 x 100	100	126062	M 10 x 90	100	126947*	* = The delivery time is 30 days		
M 8 x 120	100	126065	M 10 x 100	100	126948*	AGR: 00.271		
M 8 x 130	100	126066*	M 10 x 120	100	126949*			

Round threaded sockets, steel 4.6, zinc plated

Characteristics

- With continuous internal thread

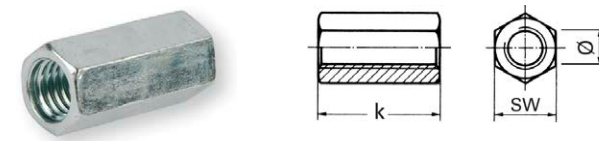


Round threaded sockets, steel 4.6, zinc plated						
Title	Thread	Thread Pitch mm	Height nut	Ø external	PU Piece	Article No.
Round threaded socket	M 6	1 mm	30 mm	10 mm	100	013034
Round threaded socket	M 8	1.25 mm	30 mm	11 mm	100	013035
Round threaded socket	M 10	1.5 mm	30 mm	13 mm	100	013036

AGR: 01.116

INTERNAL/Approved (2019-03-23 01:38:41)

Hexagon threaded sockets, steel 4.6, zinc plated



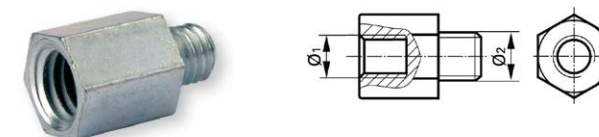
Characteristics

- With continuous internal thread

Hexagon threaded sockets, steel 4.6, zinc plated						
Title	Thread	Thread Pitch mm	Height nut	Wrench Width	PU Piece	Article No.
Hexagon threaded socket	M 6	1 mm	30 mm	10 mm	100	013024
Hexagon threaded socket	M 8	1.25 mm	25 mm	11 mm	50	117916
Hexagon threaded socket	M 8	1.25 mm	30 mm	11 mm	100	117917
Hexagon threaded socket	M 10	1.5 mm	30 mm	13 mm	100	117918
Hexagon threaded socket	M 12	1.75 mm	40 mm	17 mm	50	117921
Hexagon threaded socket	M 12	1.75 mm	40 mm	17 mm	50	806808
Hexagon threaded socket	M 20	2.5 mm	50 mm	27 mm	10	117923

AGR: 01.116

Reducing sockets, steel 4.6, zinc plated



Characteristics

- Hexagonal, female socket / male thread bolts, galvanized steel

Reducing sockets, steel 4.6, zinc plated					
Title	Ø internal	Ø external	PU Piece	Article No.	
Reducing socket	8 mm	10 mm	100	430625	
Reducing socket	10 mm	8 mm	100	430633	

AGR: 01.119

Double Holder with Inner Thread

Characteristics

- With inner thread M 8, long hole 25 x 8,5 mm, steel zinc plated

Technical Data

Material Steel zinc plated

Title	For screw-Ø	Thread Distance	PU Piece	Article No.
Double Holder	M 8	65 mm	50	777579
Double Holder	M 8	85 mm	50	777587

AGR: 13.335



Trapezoidal Sheet Metal Mounting Hanger

- Threaded rod with gradually adjustable height thanks to revolving retaining nut.
- The mounting hanger can be adapted to the different trapezoidal sheet profile forms by slight bending
- Fixation with thread bar or sealing rivets (sleeve-Ø 4 mm)

Application Area

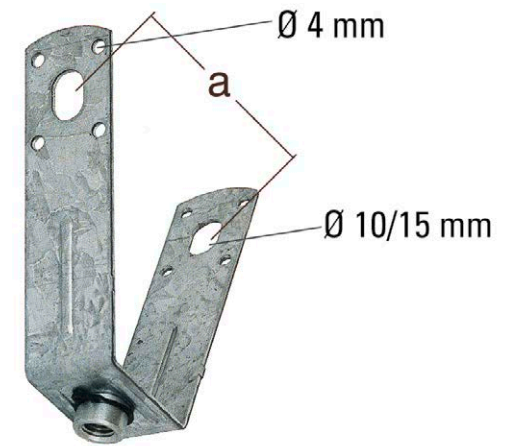
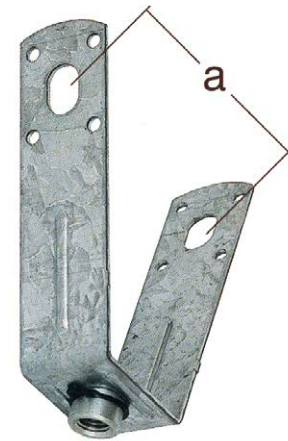
- For fixing installation constructions directly to trapezoidal sheet metal roofs

Characteristics

- Zinc Plated Steel

Technical Data

Opening width	85 mm
Format	28
Maximum load	500 kg
Material	Steel zinc plated



Title	For screw-Ø	Mounting hole dimension	Diameter Rivet hole	Width	Thickness	PU Piece	Article No.
Trapeze Plate Hanger	M 8	-	-	-	-	50	059506
Trapezoidal Sheet Metal Mounting Hanger M10	M 10	15 x 10 mm	4 mm	28 mm	2 mm	50	777684

AGR: 13.334

Trapeze Plate Plier

- The longer lever allows the holes for the subsequent fixing to be punched with ease
- Replaceable punching die increases the life span of the trapezoidal sheet metal pincer

Application Area

- Hole pincer for trapezoidal sheet metal up to 1.25mm
- Mouth opening 74mm – 80mm



Title	PU Piece	Article No.
Trapeze Plate Pliers	1	059516
AGR: 03.209		

Universal holder KZS-U

Characteristics

- With plastic lid, can be mounted on horizontal and vertical pipe lines, with strap

Title	PU Piece	Article No.
NO.PLT SYS-A UNI-BRKT/350 COMP	50	200719

AGR: 13.340



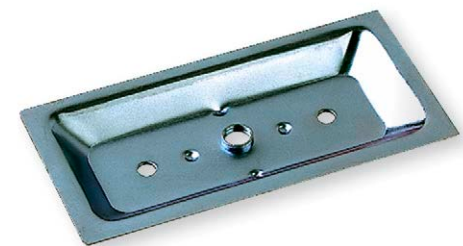
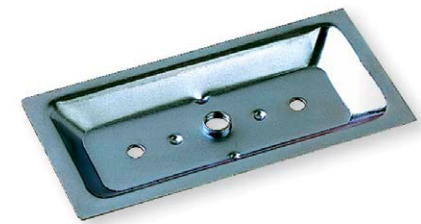
License plate holder

Characteristics

- Without lid

Title	PU Piece	Article No.
NUMBER PLATE SYSTEM-H BRACKET	25	130053

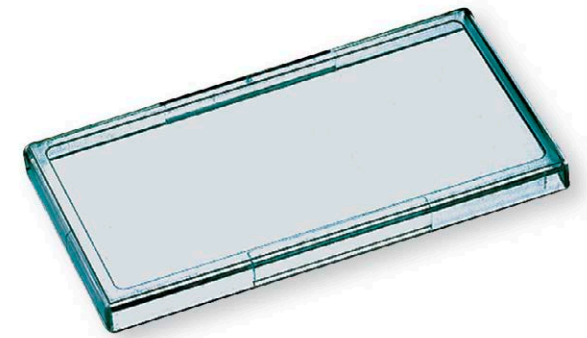
AGR: 13.340



Plastic cover KZS-D

Characteristics

- 102 x 51 mm, compatible to the mount BRK-H



Title	Width	Length	PU Piece	Article No.
Plastic lid	51 mm	102 mm	50	130056

AGR: 13.340

Empty Grooved Plates

- Easy and quick labelling of pipelines

Characteristics

- 100 x 50 mm, without imprint



Title	Width	Length	Execution	Color	PU Piece	Article No.
BLANK SIGN RIVETED BLUE	50 mm	100 mm	Grooved	Blue	50	130062
BLANK SIGN RIVETED RED	50 mm	100 mm	Grooved	Red	50	130059
Empty plate grooved white	50 mm	100 mm	Grooved	White	50	130058

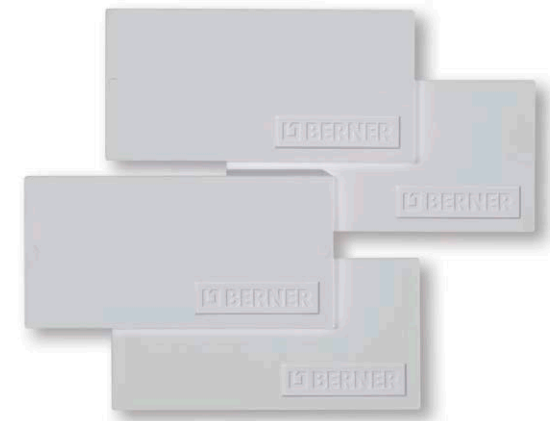
AGR: 13.342

Plain labels smooth KZS

- Easy and quick labelling of pipelines

Characteristics

- 100 x 50 mm, without imprint



Title	Width	Length	Execution	Color	PU Piece	Article No.
NO. PLT SYS BLNK SIGN SMTH BLU	50 mm	100 mm	smooth	Blue	50	929140
NO. PLT SYS BLNK SIGN SMTH GRN	50 mm	100 mm	smooth	Green	50	929166
NO. PLT SYS BLNK SIGN SMOOTH GR	50 mm	100 mm	smooth	Grey	50	929115
Smooth Blank Plate	50 mm	100 mm	smooth	Red	50	929131
Smooth Blank Plate	50 mm	100 mm	smooth	White	50	929123
NO. PLT SYS BLNK SIGN SMTH YLW	50 mm	100 mm	smooth	Yellow	50	929174

AGR: 13.341

Constructional Plugs

Application Area

- Design with plastic thread: for the leakage test during pipe installation
- Design with brass thread: for the leakage test and sealing of lines which are only later provided with fittings

Scope Of Delivery

- Including thread sealing ring - thus completely sealed

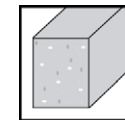
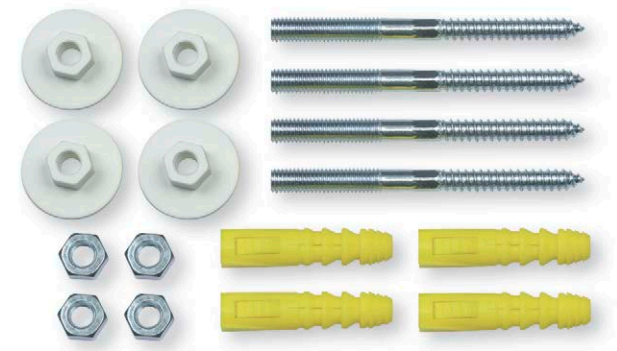


Title	Connection Thread, Nominal-Ø Inch	PU Piece	Article No.
Constructional Plug	1/2 "	25	114449
Brass Constructional Plugs	1/2 "	25	114445
Constructional Plug	3/4 "	1	088603

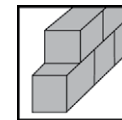
AGR: 13.902

Washbasin mounting WB 95

Title	PU Piece	Article No.
WB- 95 BT (4 PLUG)	1	052116
AGR: 13.904		



Béton



Matériaux
pleins

Basin Fixing

- Packed in pairs into a polybad for an easy calculation
- Complete-set avoids a seperated storage of the individual components

Application Area

- Complete-Mountin Kit for the assembly of toilettes or commercial washbasins and sinks

Characteristics

- Hanger bolt, 10 x 120 mm, zinc plated

Scope Of Delivery

- 2 dowels B14
- 2 hanger bolts 10x120 galvanized
- 2 hex nuts M10 galvanized
- 2 diamonds discs 10x30x1,5 galvanized
- 2 PL-shiives BWB for NF



Title	Ø	Length	Dimension	PU Piece	Article No.
WB-120 BT (2 plug)	10 mm	120 mm	10 x 120	1	480053
WB-140 BT (2 plug)	10 mm	140 mm	10 x 140	1	052132

AGR: 13.904

toilet fixation WC 8 A2

- Each set is packed in a polybag

Scope Of Delivery

- 2 universal plugs B8
- 2 A2 stainless steel screws DIN 571 with a hexagonal and a slit 6 x 70 mm
- 2 WC-nylon rosettes
- 2 plastic caps in white



Title	PU Piece	Article No.
WC8 A2 CAPS WHITE 2 DOWELS	1	206990
AGR: 13.903		